

## ABSTRACT

The invention relates to a method for measuring currents in a motor controller. Some current sensing devices placed on the motor wires or inside the motor controller provide low amplitude output signals thus complicating sampling and data processing. In order to improve the signal / noise ratio, an oversampling technique is disclosed which makes use of a differential transmission of the output signal. Further, by applying intelligent sorting techniques on the sampled data, a substantial improvement in the signal / noise ratio can be obtained. The invention also concerns a motor controller using this method, and discloses the use of a power card and a control card, where the current sensing device is placed on the power card and a differential amplifier is placed on the control card. The gain of the differential amplifier is controlled by components placed on the power card as well as on the control card.